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NASA Prepares For “Last Chance” Meteor Shower

The early morning hours of November 19 may be your last chance to see the spectacular Leonid meteor shower in its full glory, according to astronomers.

“Even with the full moon, this year’s Leonids will probably be better than any other for the next hundred years,” said Dr. Don Yeomans, an astronomer at NASA’s Jet Propulsion Laboratory. “If you’re ever going to see them, this might be the year to try,” he said.

The shower is predicted to have two peaks, each a couple of hours long, during which the most meteors can be seen. The shower’s second peak, most prominent in North American skies, is expected at around 5:30 a.m. EST, November 19, and promises the rare spectacle of a few meteors every minute or even more. “Observers in good locations away from city lights might see a few hundred per hour. You’ll only get to see the bright ones because the moonlight will wash out the ones that aren’t as bright,” said Yeomans. Last year, observers did not have to contend with the Moon and saw meteors at a pace of several hundred per hour.

An earlier peak is expected over Europe and Africa the night of Nov. 18, and observers in North America might see a few meteors skimming the top of the atmosphere from this first peak starting around 11:30 p.m. EST, November 18.

The Leonids are grains of dust from comet Tempel-Tuttle colliding into the Earth’s atmosphere. Most Leonid particles are tiny and will vaporize very high in the atmosphere due to their extreme speed. They present no threat to people on the ground or in airplanes.

As it progresses in its 33-year orbit, the comet releases dust particles every time it comes near the Sun. Earth intersects the comet’s debris trail every year in mid-November, but the intensity of each year’s Leonid meteor shower depends on whether Earth ploughs through a particularly concentrated stream of dust within the broader debris trail.

The dust that Tempel-Tuttle shed in 1866 forms the stream predicted to give Americans a good show this year. Last year, people in Asia saw the plentiful collisions within that stream. A dust stream from 1767 provided last year’s

peak hour of viewing in North America and will provide this year’s peak hour of viewing in Europe. After 2002, Earth won’t hit either of those streams again for decades to come, and is not predicted to encounter a dense Leonid stream until 2098 or 2131.

The golden rule for watching the Leonids — or any meteor shower — is to be comfortable. Be sure to wrap up warmly — a sleeping bag placed atop a lawn chair facing east is a good way to enjoy the show. Put your chair in a clear, dark place with a view of as much of the sky as possible. Don’t stare at any one place — keep your eyes moving across the sky. Most Leonids will appear as fleeting streaks of light, but watch for the bigger ones that produce fireballs and trails — some trails will remain visible for several minutes or more.

The Leonids get their name from the constellation where they appear to originate; the meteors will be radiating from the Sickle pattern in the constellation Leo the Lion, which will be rising out of the east-northeast sky.

Don’t look directly at the constellation, but at the area above and around it. And, though you don’t need them to see the Leonids, a pair of binoculars could come in handy.

Researchers think meteors might have showered the Earth with the molecules necessary for life’s origin. A two-aircraft campaign, led by astronomer Dr. Peter Jenniskens of the SETI Institute and NASA’s Ames Research Center, will investigate this possibility.

“We are eager to get another chance to find clues to two puzzling questions: What material from space rains down on Earth, and what happens to the (meteor’s) organic matter when it interacts with the atmosphere?” said Dr. Michael Meyer, senior scientist for astrobiology at NASA Headquarters.

On Nov. 15, a team of 42 astrobiologists from seven countries departed on a mission to Spain to observe this year’s two Leonid storm peaks. NASA’s DC-8 Airborne Laboratory will carry high-speed cameras; a radio receiver to listen to upper atmosphere molecules; and a team of meteor observers, who will keep track of the meteor activity for satellite operators concerned about impact hazards.



Wallops shorts.....

In the news

Latina Magazine

“Mission Possible – Yes, this Latina really is a rocket scientist” — Article on Lissette Martinez.

Virginia Pilot

“Firm Wants to Plant Wind Farm”

Eastern Shore News

“Army Engineers Want Opinion on Wind Farm”

Daily Times

“Shore Wind Farm Proposal Under Fire”

In the Field

A Wallops NSROC team is currently conducting launch operations for a Terrier-Black Brant from White Sands Missile Range, N.M.

Wallops NSROC personnel also have departed for Svalbard, Norway, preparing for the launch of a Black Brant X currently scheduled for early December.

Holiday Closures

The cafeteria and the Rocket Club will be closed on November 29. The Exchange Store will be open from 11 a.m. to 2 p.m.

Inside Wallops

The next *Inside Wallops* will be December 2.

STS-113 Launch Scheduled for November 22

The launch of Space Shuttle, STS-113, Endeavour, was delayed to no earlier than Friday, November 22, to give engineers more time to assess the severity of the arm problem and to confirm the fatigue-related crack in an oxygen line flex hose is not any sort of generic, fleet-wide problem.

Happy Thanksgiving November 28

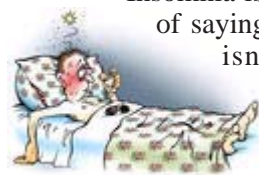
In 1863, President Abraham Lincoln declared a national day of thanksgiving.

Since that time U.S. Presidents have issued a Thanksgiving Day Proclamation each year, usually designating the fourth Thursday of November as the holiday.



Health Hints

What causes insomnia?



Insomnia is the body's way of saying that something isn't right. Many things can cause insomnia — things like stress, too much caffeine, depression, changes in work shifts, and pain from medical problems, such as arthritis. Many people have insomnia. People who have insomnia may not be able to fall asleep. They may wake up during the night and not be able to fall back asleep, or they may wake up too early in the morning.

Is insomnia a serious problem?

It's not a serious problem for your health, but it can make you feel tired, depressed and irritable. It can also make it hard to concentrate during the day.

How much sleep do I need?

Most adults need about 7 to 8 hours of sleep each night. You know you're getting enough sleep if you don't feel sleepy during the day. The amount of sleep you need stays about the same throughout adulthood. However, sleep patterns may change with age. For example, older people may sleep less at night and take naps during the day.

How is insomnia treated?

The treatment of insomnia can be simple. Often, once the problem that's causing the insomnia is taken care of, the insomnia goes away. The key is to find out what's causing the insomnia so that it can be dealt with directly. Simply making a few changes in their sleep habits helps many people.

What can my doctor do to find out why I'm not sleeping?

Your family doctor may ask you and your bed partner some questions about your sleep habits (such as when you go to bed and when you get up), any medicine you take, and the amount of caffeine and alcohol you drink. Your doctor may also ask if you smoke.

Other questions may include how long you've been having insomnia, if you have any pain (such as from arthritis), and if you snore while you sleep. Your doctor may also ask about events or problems in your life that may be upsetting you and making it hard for you to sleep.

One NASA Email is Here

Many NASA civil servants have changed their address for the email address system, but there are some who haven't completed this important task. There are only nine working days to make the change.

Directions can be found at: <http://CNE.gsfc.nasa.gov>.

For questions or concerns, please contact Mike Richter x66376.

The Wallops Mentoring Program

"When I was asked to be a mentor, I had many thoughts. What could I possibly give to another person; I have trouble managing myself. I don't have enough time to do my job, how can I make time for someone else? However, after deciding to make the initial commitment to the mentoring program, it became natural to find time to meet with my mentee, determine what we wanted our goal to be, and to identify our tasks to get there. Looking back over our mentoring relationship, we taught each other and learned from each other. Our mentoring relationship enabled us to find a balance in our work world and even spilled over into our home world." (Pam Taylor)

"The mentoring program provided a structure for me to focus on my career. Careers don't just happen; they require effort. The workshops helped me define my values and design a career in keeping with my values. Working with a mentor brought a new dimension and objectivity to my experiences, skills, and goals. The lessons learned in the mentoring program spilled over into my personal relationships and responsibilities. Best perk of all is that I got to know the other mentors and mentorees on a more personal level and developed a wonderful friendship with my mentor." (Patricia J. Dworske)

"I appreciate that my mentor made a point to participate in mentoring program activities. His help developing an action plan and help discussing career choices was invaluable. I would encourage other employees to take advantage of the opportunity to talk to people you would not otherwise have a chance to meet." (Donna Smith)

The Office of Human Resources is accepting applications through December 2. Anyone interested in the Wallops program should register online indicating that you are at Wallops. Go to <http://www.mentoringconnection.com> For further information contact Nichole Richmond on x66-5757.

Academic Award

The Wallops Black History Club is offering an Academic Achievement Award to the child of a current Wallops employee (NASA, NOAA, Navy, Coast Guard or contractor).

The award will be made on a competitive basis to a student who has been accepted to an accredited college or university, who is pursuing a degree in science or technology and who submits an application that includes an essay by December 2.

For further information or an application, contact Robert Tittle on x1244, Dave Smith on x1316 or Lisa Johnson on x1412.

Introductory Overhead Crane Operator Training

December 16 and 17

8 a.m. to 4:30 p.m.

Room E-208, Building N-159

This course satisfies the requirements of the NASA Standard for Lifting Devices and Equipment, NASA-STD-8719.9, for the operation of electric, manual or air driven overhead cranes and hoists. Successful completion of this course, along with a physical examination will lead to licensing of the crane operators by NASA.

There is no charge for the course for NASA civil service employees. Contractors and other tenant personnel will be required to pay \$300 per student. They should contact their NASA representative about setting up a charge-back Fiscal Job Order Number ending with "-69" prior to the training.

Contractor and other tenant personnel should forward a training request form with the required charge-back JON and with authority to collect the required fee to A. V. Hanagud, Code 546, prior to the date of training.

For further information, contact Bill Hargrove on x1797 or by email: William.T.Hargrove.1@gsfc.nasa.gov

Lunch & Learn

The Employee Assistance Program monthly Lunch & Learn will be held November 21 in the Conference Room, Building E-2 from 11:30 a.m. to 12:30 p.m. The topic is the 10 "Ta-Dahs" for Dealing with Holiday Stress –

- * Trade frowns for smiles
- * Talk to yourself in fun ways
- * Touch someone else's life
- * Take time to listen to yourself
- * Treat yourself to pleasure and passion
- * Turn on your imagination
- * Tidy up your life
- * Tap into the universe of humor
- * Try to be different
- * Tolerate more and give thanks often

Need Cheese?

The Wallops Exchange and Morale Association will be accepting cheese orders through November 21. Order forms are available at the Wallops Exchange, Building E-2 between 10 a.m. and 2 p.m. Cheese must be picked up on November 25 from 10:30 a.m. to 1 p.m. at the rear of Building F-3.

For additional information contact George Brothers on x1528.

Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Wallops Office of Public Affairs, Extension 1584, in the interest of Wallops employees. Recent and past issues of *Inside Wallops* also may be found on the NASA Wallops Flight Facility homepage: www.wff.nasa.gov

Editor

Betty Flowers